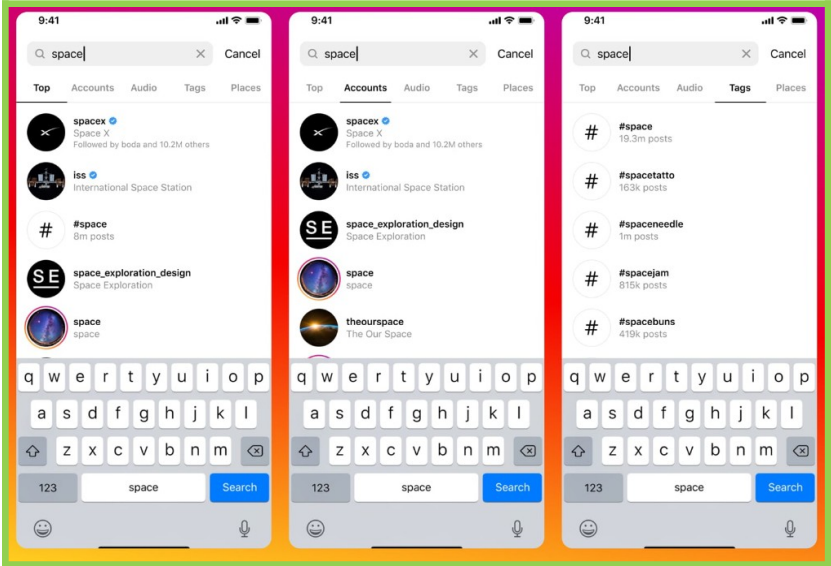


Exhibit 3.2

Infringement Claim Chart for U.S. Pat. No. US10237420B1 v. Instagram ("Defendant")

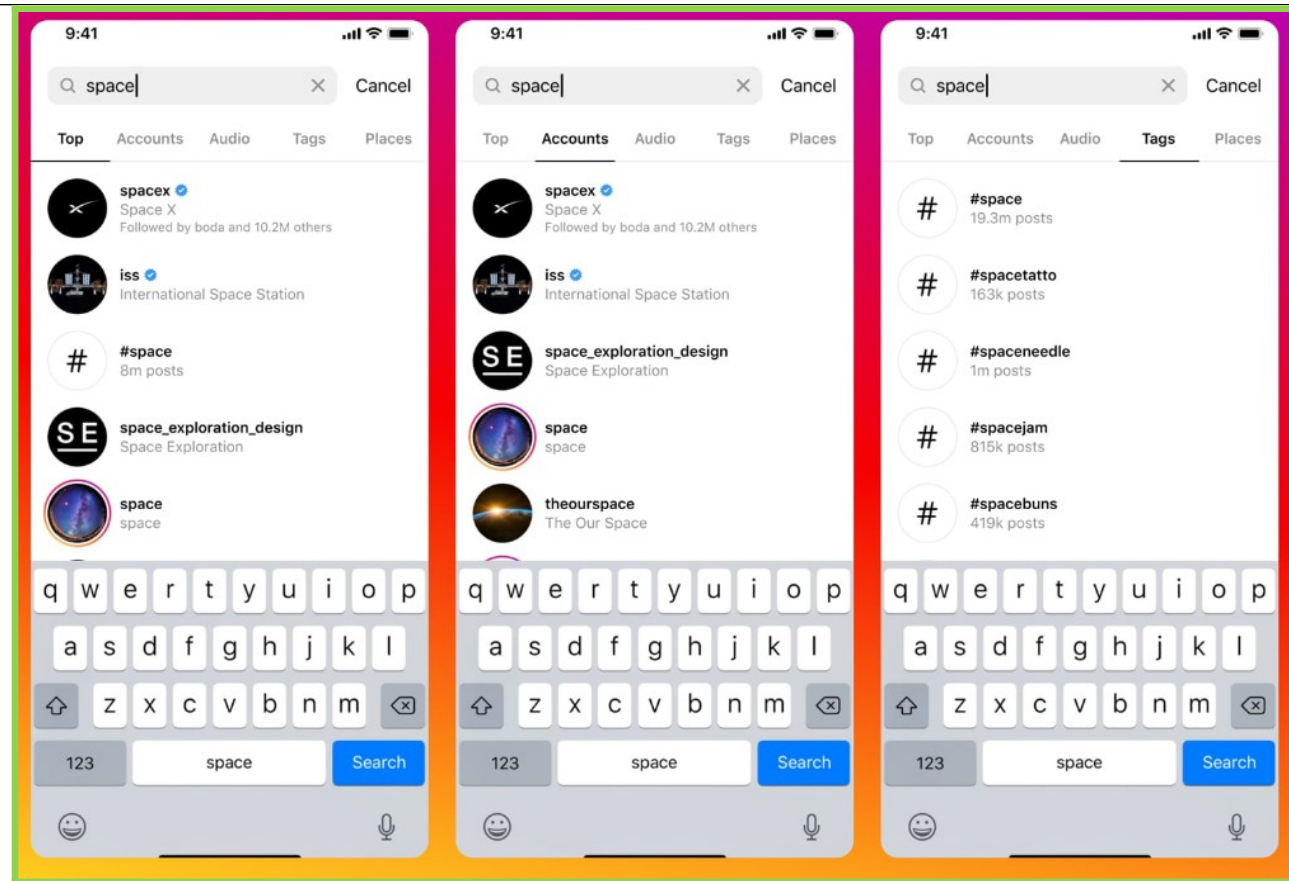
Claims	Evidence
<p>20. A method of processing requests, comprising:</p>	<p>The Instagram platform with system-generated Searching Service performs a method of processing requests. For Example, Instagram Searching Service receive user request, process them, and provides needed information right at the system. So, it helps you find what you're looking for and stay in control of what you see.</p> <div data-bbox="699 553 1740 607" style="border: 1px solid green; padding: 5px; margin: 10px 0;"> Search on Instagram sorts through millions of accounts and posts to help you browse your interests. From nail art to interior design to dinner recipes, Search is a place for discovery and inspiration. </div> <p>Source: https://about.instagram.com/blog/announcements/break-down-how-instagram-search-works</p> <div data-bbox="806 758 1631 1321" style="border: 2px solid green; padding: 10px; margin: 10px 0;">  <p>The image shows three side-by-side screenshots of an iPhone displaying the Instagram search results for the query "space". Each screenshot has a green border. The top screenshot shows the "Top" tab with results for "spacex", "iss", "#space", "space_exploration_design", and "space". The middle screenshot shows the "Accounts" tab with results for "spacex", "iss", "space_exploration_design", "space", and "theourspace". The bottom screenshot shows the "Tags" tab with results for "#space", "#spacetattoo", "#spaceneedle", "#spacejam", and "#spacebuns". Each screenshot includes a search bar at the top with "space" entered, a keyboard at the bottom, and a "Search" button.</p> </div> <p>Source: https://about.instagram.com/blog/announcements/break-down-how-instagram-search-works</p>

	<p>search-works</p> <p>Search is built to help you find accounts and topics of interest. It's different from Feed, Stories, Reels and Explore because your input helps us figure out what to show you. Your search tells us what you're looking for, and it's noticeable when the results aren't useful. It's important for us to get this right, so we try to organize search results by what's most relevant to you – whether it be a close friend, a creator you love, or ideas for vegan desserts.</p> <p>Source: https://about.instagram.com/blog/announcements/break-down-how-instagram-search-works</p> <p>Let's say you're interested in finding pictures of space after seeing the blue moon. When you tap the search bar on the Explore page, the first thing you see is your recent searches. As you begin typing "space," we show you accounts, audio, hashtags, and places that match the text of your search. In this case, results like @space and #space show up because "space" appears in their name.</p> <p>Source: https://about.instagram.com/blog/announcements/break-down-how-instagram-search-works</p>
estimating at least one content-specific or requestor-specific characteristic associated with each received request;	<p>The Instagram platform with system-generated Searching Service estimates at least one content-specific or requestor-specific characteristic associated with each received request. For Example, Instagram estimates at least one content-specific (i.e., search query parameters (what the user looking for)) or requestor-specific (user's intent) characteristic associated with each received request.</p> <p>Let's say you're interested in finding pictures of space after seeing the blue moon. When you tap the search bar on the Explore page, the first thing you see is your recent searches. As you begin typing "space," we show you accounts, audio, hashtags, and places that match the text of your search. In this case, results like @space and #space show up because "space" appears in their name.</p> <p>Source: https://about.instagram.com/blog/announcements/break-down-how-instagram-search-works</p>

[search-works](#)

The keywords you can use to search for content is expanding. We're currently focused on getting keyword search results right in English, and will add support for other languages in the future.

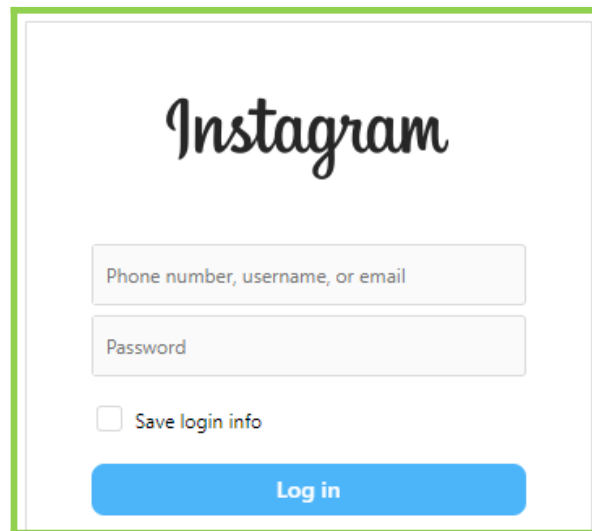
Source: <https://about.instagram.com/blog/announcements/break-down-how-instagram-search-works>



Source: <https://about.instagram.com/blog/announcements/break-down-how-instagram-search-works>

Search is built to help you find accounts and topics of interest. It's different from Feed, Stories, Reels and Explore because your input helps us figure out what to show you. Your search tells us what you're looking for, and it's noticeable when the results aren't useful. It's important for us to get this right, so we try to organize search results by what's most relevant to you – whether it be a close friend, a creator you love, or ideas for vegan desserts.

Source: <https://about.instagram.com/blog/announcements/break-down-how-instagram-search-works>



Source: <https://www.instagram.com/>

determining
availability of a
plurality of
alternate target
resources,
each
respective targ

The Instagram platform with system-generated Searching Service determines a set of available alternate target resources, each having at least one respective target characteristic. For Example, Instagram uses natural language understanding technologies to understand what is being requested and on the basis of this, determine resources (content) on the characteristic such as current availability and query matching of the resources.

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having at least
one
respective targ
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c;

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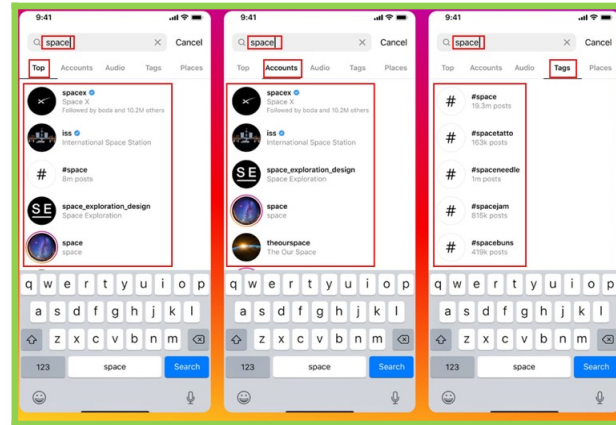
Source: <https://about.instagram.com/blog/announcements/break-down-how-instagram-search-works>

In addition to the text you type into search, we use information from accounts, hashtags and places – called signals – to rank your search results. The most important signals we use, in order of importance, are:

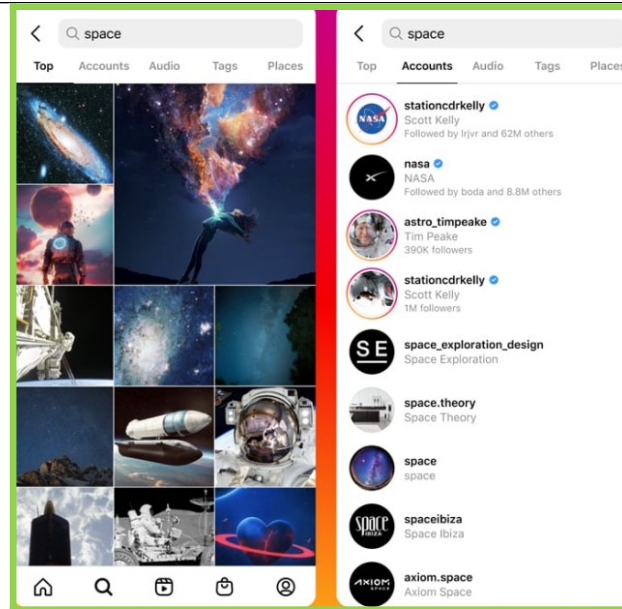
Source: <https://about.instagram.com/blog/announcements/break-down-how-instagram-search-works>

We're also making search results better for exploration. For example, your search for "space" will show you space-related photos and videos, too. This is especially helpful when you don't have an exact username or hashtag in mind when searching for a certain topic.

Source: <https://about.instagram.com/blog/announcements/break-down-how-instagram-search-works>



Source: <https://about.instagram.com/blog/announcements/break-down-how-instagram-search-works>



Source: <https://about.instagram.com/blog/announcements/break-down-how-instagram-search-works>

evaluating, with at least one automated processor, a plurality of alternate allocations of the respective received request with different available target

The Instagram platform with system-generated Searching Service evaluates, with the automated processor, a plurality of alternate allocations of the respective received request with different available targets, according to a ranking dependent on a probabilistic predictive multivariate evaluator, based on the at least one content-specific or requestor-specific characteristic, and the respective target characteristics of the plurality of alternate target resources. For Example, Instagram uses the content-specific or requestor-specific characteristics of the request and the availability and characteristics parameters of the target resources to evaluate a plurality of alternate allocations of the respective received request with different available resources via artificial intelligence techniques such as neural networks and machine learning.

ts, according to a ranking dependent on a probabilistic predictive multivariate evaluator, based on the at least one content-specific or requestor-specific characteristic, and the respective target characteristics of the plurality of alternate target resources; and

In addition to the text you type into search, we use information from accounts, hashtags and places – called signals – to rank your search results. The most important signals we use, in order of importance, are:

- **Your text in Search.** The text you enter in the search bar is by far the most important signal for Search. We try to match what you type with relevant usernames, bios, captions, hashtags and places.
- **Your activity.** This includes accounts you follow, posts you’ve viewed, and how you’ve interacted with accounts in the past. We usually show accounts and hashtags you follow or visit higher than those you don’t.
- **Information about the search results.** When there are a lot of potential results, we also look at popularity signals. These include the number of clicks, likes, shares and follows for a particular account, hashtag or place.

Source: <https://about.instagram.com/blog/announcements/break-down-how-instagram-search-works>

How does artificial intelligence make decisions about content?

AI teams start by building machine learning models that can do things like recognize what’s in a photo or analyze the text of a post. For example, AI models may be built to learn whether a piece of content contains nudity or graphic content. Those models may then determine whether to take action on the content, such as removing it from the platform or reducing its distribution.

Source: <https://help.instagram.com/423837189385631>

Instagram explains how it uses AI to choose content for your Explore tab

Source: <https://www.theverge.com/2019/11/25/20977734/instagram-ai-algorithm-explore-tab-machine-learning-method>

Instagram has shared new details on how its app uses machine learning to surface content for users, stressing that, when making recommendations, it focuses on finding accounts it thinks people will enjoy, rather than individual posts.

Source: <https://www.theverge.com/2019/11/25/20977734/instagram-ai-algorithm-explore-tab-machine-learning-method>

How Instagram Uses Artificial Intelligence and Big Data

1. Explore Page and Search Function

These content pieces are then filtered in order to remove all spam, misleading and policy-violating content from them, and then the remaining posts are ranked on the basis of how probable a user is to interact with each one. At long last, the top 25 posts are then sent to the first page of the user's Explore tab.

Source: <https://www.analyticssteps.com/blogs/how-instagram-uses-ai-and-big-data-technology>

4. Designing Personalised Feeds

With the level of content shared on the app rapidly growing it becomes more and more paramount for the platform to deliver content that is relevant to its users. Hence in 2016, Instagram altered its feed to display first, the posts it believes its users would favor and share instead of in reverse- chronological order.

To do this machine learning algorithm was put to work to go through all the content and carefully comprehend which of the content would be more relevant for its users, in order to design a personalized feed for each of them.

Source: <https://www.analyticssteps.com/blogs/how-instagram-uses-ai-and-big-data-technology>

How Instagram Uses AI to Enhance The User Experience

Source: <https://insights.daffodilsw.com/blog/how-instagram-uses-ai-to-enhance-the-user-experience>

Different Ranking Systems for Instagram Posts

People have certain expectations for the type of content that each part of the app presents to them. They expect to see content from friends and relatives in their Stories, while the Explore page is meant for discovering quality content from users they do not follow.

The Instagram machine learning algorithms use certain user activities for insights that Instagram refers to as "signals". Signals include what a person posted, when and how often a person posts content, user preferences towards particular types of content, etc.

These signals are used in ranking systems for Instagram posts like the Home Feed Ranking System and Explore Ranking System.

Source: <https://insights.daffodilsw.com/blog/how-instagram-uses-ai-to-enhance-the-user-experience>

Using these signals aggregated by artificial intelligence Instagram ranks posts and pages on Explore, Reels, Feed, and Stories. When it comes to Feeds and Stories, the Instagram machine learning algorithm collects the most recent pictures and videos shared by friends as the starting data set. Using all the above signals, the posts are ranked and the higher ranked posts are seen by the user first.

For the Explore page, the users' recently followed profiles and pages, the places visited, posts where comments were posted, are all collected. Based on this data set, AI in Instagram uses predictive analytics to show the user the kind of posts that they are more likely to engage with.

Source: <https://insights.daffodilsw.com/blog/how-instagram-uses-ai-to-enhance-the-user-experience>

generating a control signal, by the at least one automated processor, selectively dependent on the evaluating, to control the allocations of the respective received request with the different available targets.

The Instagram platform with system-generated Searching Service generates a control signal, by the automated processor, selectively dependent on the evaluating, to control the allocations of the respective received request with the different available targets.

For Example, responsive to the evaluation, Instagram generates a control signal for the allocation of the different available resources. The control signal is selectively dependent on the evaluation in view of other factors such as the overall throughput of the system and the priority and requirements of other concurrent requests.

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Source:
[technology](https://www.analyticssteps.com/blogs/how-instagram-uses-ai-and-big-data-technology)

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Source: <https://insights.daffodilsw.com/blog/how-instagram-uses-ai-to-enhance-the-user-experience>

The Sensitive Content Control allows you to choose how much content you see in Explore, Search, Reels, Accounts You Might Follow and Recommendations in your feed that you might find upsetting or offensive.

Source: <https://help.instagram.com/1055538028699165>

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